Name _____ Section _____ Date _____

WELLNESS WORKSHEET 65

Determining Daily Energy and Macronutrient Intake Goals

Estimating Daily Energy Requirements

If your weight is stable, your current daily energy intake is the number of calories you need to consume to maintain your weight at your current activity level. You can determine the number of calories you consume on a particular day by keeping a careful and complete record of everything you eat and then totaling the number of calories in all the foods and beverages you consumed. This calculation can be done by hand, by using a nutrition analysis software program, or by using one of several Web sites that perform this type of analysis; for example, go to MyPyramid.gov and click on MyPyramid Tracker.

People often underestimate the size of their food portions, and so energy goals based on estimates of current calorie intake from food records can be inaccurate. You can also estimate your daily energy needs using the following formulas. To use the appropriate formula for your gender, you'll need to plug in the following:

- Age (in years)
- Weight (in pounds)
- Height (in inches)
- Physical activity coefficient (PA) from the table below; to help estimate your physical activity level, consider the following guidelines: Someone who walks briskly for 30 minutes per day (or the equivalent) in addition to the activities in a sedentary lifestyle is considered "low active"; someone who walks briskly for 90 minutes per day is considered "active."

Physical Activity Coefficient (PA)

Physical Activity Level	Men	Women
Sedentary	1.00	1.00
Low active	1.12	1.14
Active	1.27	1.27
Very active	1.54	1.45

Estimated Daily Energy Requirement for Weight Maintenance in Men

$864 - (9.72 \times \text{Age}) + (\text{PA} \times [(6.39 \times \text{Weight}) + (12.78 \times \text{Height})])$

1. 9.72 × _____ Age (years) = _____
2. 864 – _____ Result from step 1 = _____ [*result may be a negative number*]
3. 6.39 × _____ Weight (pounds) = _____
4. 12.78 × _____ Height (inches) = _____
5. _____ Result from step 3 + _____ Result from step 4 = _____
6. _____ PA (from table) × _____ Result from step 5 = _____
7. _____ Result from step 2 + _____ Result from step 6 = _____ Calories per day

Estimated Daily Energy Requirement for Weight Maintenance in Women

$387 - (7.31 \times \text{Age}) + (\text{PA} \times [(4.91 \times \text{Weight}) + (16.78 \times \text{Height})])$

1. 7.31 × _____ Age (years) = _____
2. 387 – _____ Result from step 1 = _____ [*result may be a negative number*]
3. 4.91 × _____ Weight (pounds) = _____
4. 16.78 × _____ Height (inches) = _____
5. _____ Result from step 3 + _____ Result from step 4 = _____
6. _____ PA (from table) × _____ Result from step 5 = _____
7. _____ Result from step 2 + _____ Result from step 6 = _____ Calories per day

(over)

Setting Intake Goals for Protein, Fat, and Carbohydrate

Once you have an estimate of your daily energy (calorie) needs, the next step is to set goals for daily intake from the three classes of macronutrients—protein, fat, and carbohydrate. You can allocate your total daily calories among the three classes of macronutrients to suit your preferences; just make sure that the three percentage values you select total 100% and that your values fall within the Acceptable Macronutrient Distribution Ranges (AMDRs) set by the Food and Nutrition Board of the National Academies. For example, you may choose targets of 15% of total daily calories from protein, 35% from fat, and 50% from carbohydrate. Fill in your percentage goals in the chart below:

Nutrient	AMDR (% of total daily calories)	Individual goals (% of total daily calories)
Protein	10–35%	_____ %
Fat	20–35%	_____ %
Carbohydrate	45–65%	_____ %
		100%

To translate your own percentage goals into daily intake goals expressed in calories and grams, multiply the percentages you've chosen by your total calorie intake and then divide the result by the corresponding calories per gram. (Use the total daily calorie goal you calculated in the first part of this worksheet and the percentage goals you set in the table above.) For example, a fat limit of 35% applied to a 2200-calorie diet would be calculated as follows: 0.35 × 2200 = 770 calories of total fat; 770 ÷ 9 calories per gram = 86 grams of total fat. (Remember, fat has 9 calories per gram and protein and carbohydrate have 4 calories per gram.)

Nutrient	Total calories	×	Macronutrient percentage goal (expressed as a decimal)	=	Calories per day of macronutrient	÷	Calories per gram of macronutrient	=	Grams per day of macronutrient
Protein	_____	×	_____	=	_____ calories/day	÷	4 calories/gram	=	_____ grams/day
Fat	_____	×	_____	=	_____ calories/day	÷	9 calories/gram	=	_____ grams/day
Carbohydrate	_____	×	_____	=	_____ calories/day	÷	4 calories/gram	=	_____ grams/day
Sample for fat	*2200*	×	*0.35*	=	*770 calories/day*	÷	*9 calories/gram*	=	*86 grams/day*

Summary of Goals

Total Daily Energy Intake: _____ calories per day

Macronutrients: Protein, Fat, Carbohydrate

Macronutrient	Percent of total daily calories	Calories per day	Grams per day
Protein	_____ %	_____ calories/day	_____ grams/day
Fat	_____ %	_____ calories/day	_____ grams/day
Carbohydrate	_____ %	_____ calories/day	_____ grams/day

To determine how close you are to meeting your personal intake goals, keep a running total over the course of the day. For prepared foods, food labels list the number of grams of fat, protein, and carbohydrate; the breakdown for popular fast-food items can be found in an appendix of your text. Nutrition information is also available in many grocery stores, in published nutrition guides, in nutrition analysis software, and online. By checking these resources, you can track the total grams of fat, protein, and carbohydrate you eat and assess your current diet.

SOURCE: Energy requirements and Acceptable Macronutrient Distribution Ranges taken from Food and Nutrition Board, Institute of Medicine, National Academies. 2002. *Dietary Reference Intakes: Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids.* Washington, D.C.: National Academy Press.